Title (en)

METHOD FOR CALIBRATING A CAMERA AND A LASER SCANNER

Title (de)

VERFAHREN ZUR KALIBRIERUNG EINER KAMERA UND EINES LASERSCANNERS

Title (fr)

PROCÉDÉ D'ÉTALONNAGE D'UNE CAMÉRA ET D'UN BALAYEUR LASER

Publication

EP 3396409 B1 20191127 (DE)

Application

EP 18166937 A 20180412

Priority

DE 102017109039 A 20170427

Abstract (en)

[origin: US2018315214A1] A method of calibrating a camera and a laser scanner for their sensor fusion is provided whereby the camera records a camera image of a scene and the laser scanner at least partly scans the scene with a scanning beam and records a remission image from the respective angular position of the scanning beam and from the intensity determined at the angular position of the scanning beam remitted from the scene, wherein an offset and/or a relative orientation between the camera and the laser scanner is determined from a comparison of the camera image and the remission image. Distances with respect to the remission image are here also determined by the laser scanner and distances with respect to the camera image are reconstructed; and in that a correspondence search of corresponding features in the camera image and in the remission image is carried out in three-dimensional space for the comparison.

IPC 8 full level

G06T 7/73 (2017.01); **G01S 7/48** (2006.01); **G01S 7/497** (2006.01); **G01S 17/42** (2006.01); **G01S 17/86** (2020.01); **G01S 17/89** (2020.01); **G06T 7/80** (2017.01)

CPC (source: EP US)

G01S 7/4808 (2013.01 - EP US); **G01S 7/4972** (2013.01 - EP US); **G01S 17/42** (2013.01 - EP US); **G01S 17/86** (2020.01 - EP US); **G01S 17/89** (2013.01 - EP US); **G06T 7/74** (2016.12 - US); **G06T 7/80** (2016.12 - EP US); G06T 2207/30244 (2013.01 - US)

Cited by

CN110619666A; US11694359B2

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